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City Gate, 95-107 Southampton Street, Reading, Berkshire  
RG1 2QW (GB).

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(74) Agent: **MATHISEN & MACARA**; The Coach House,  
6-8 Swakeleys Road, Ickenham, Uxbridge UB10 8BZ  
(GB).

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(71) Applicant (*for all designated States except US*): **KIDDE IP HOLDINGS LIMITED** [GB/GB]; Mathisen Way, Colnbrook, Slough SL3 0HB (GB).

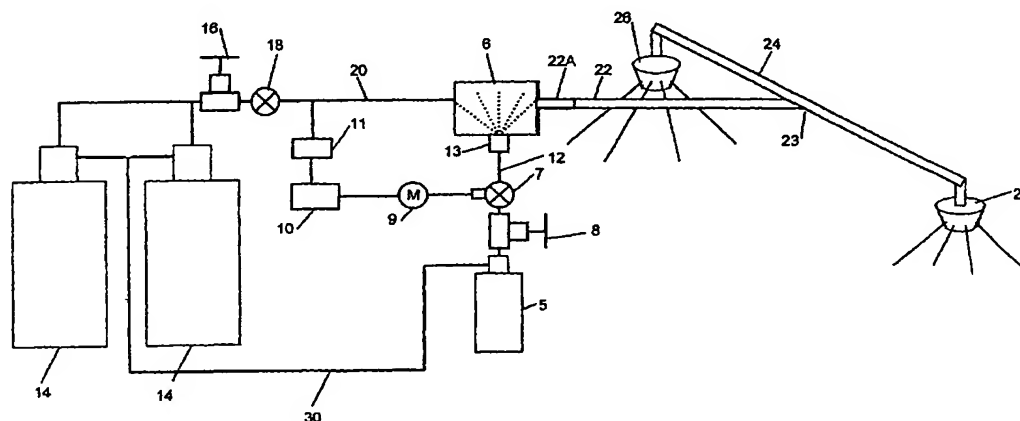
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **DUNSTER, Robert, George** [GB/GB]; 34 Royston Way, Burnham, Slough, Buckinghamshire SL1 6ER (GB). **DAVIES, Simon, James** [GB/GB]; 2 Silverdale Court, Leacroft, Staines, Middlesex TW18 4NT (GB). **LADE, Robert, James** [GB/GB]; 4

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[Continued on next page]

(54) Title: FIRE AND EXPLOSION SUPPRESSION



(57) Abstract: A fire and explosion suppression system comprises a source (5) of high pressure water which is fed to a misting nozzle (13) at one input of a mixing unit (6), and a source (14) of high pressure inert gas, such as nitrogen, which is fed along a pipe (20) to another input of the mixing unit (6). Inside the mixing unit (6), water mist, in the form of an atomised mist of very small droplet size is mixed with the pressurised gas and exits the mixing unit (6) at high pressure and high velocity along a pipe (22) and is thence discharged through spreaders (26, 28). The source (5) of the water is pressurised by a feed (30) from the source of pressurised inert gas. The mass flow rate of the water will therefore reduce as the pressure of the gas decays. This tends to maintain the ratio of the mass flow rate of the water to the mass flow rate of the gas constant. This is found to produce and maintain an advantageous distribution of droplet size in the discharged mist. A control unit (10) adjusts a metering valve (7) in dependence on the mass flow rate or the pressure of the gas in order to adjust the ratio as necessary to maintain its value constant.

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
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**B. FIELDS SEARCHED**

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, A	GB 2 375 047 A (KIDDE PLC) 6 November 2002 (2002-11-06) the whole document ---	1-26
A	US 5 799 735 A (SUNDHOLM GOERAN) 1 September 1998 (1998-09-01) the whole document ---	1-26
A	US 6 173 790 B1 (AEBISCHER FREDERIC ET AL) 16 January 2001 (2001-01-16) the whole document -----	1-26

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Name and mailing address of the ISA  
 European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel: (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Neiller, F

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